

PILOT STUDY TO DETERMINE THE INFLUENCE OF L. RHAMNOSUS BPL205, L. PLANTARUM BPL207 AND L. CRISPATUS BPL209 IN INFLAMMATION BIOMARKERS (STUDY PROSALVAG)

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Background: Normal microbiota of the reproductive tract includes a variety of Lactobacillus species that promote a healthy environment for the embryo implantation.

On the other hand, the immune factor mediated by an inflammatory response could explain the detrimental effect of certain patterns of the microbiome on infertility.

The objective of this study is to evaluate the use of orally Lactobacillus rhamnosus BPL205, Lactobacillus plantarum BPL207 and Lactobacillus crispatus BPL209 (oral probiotics) in reestablishment of vagina environment and their influence in inflammation biomarkers.

Method: Prospective pilot study to assess the effect of 10 weeks of use of the oral probiotics supplemented with vitamin D, in vaginal health reestablishment and inflammation. 21 women assisting to a fertility clinic and with indication of vaginal microbiota restoration and low number of vaginal Lactobacillus were recruited. After 5 and 10 weeks of supplementation, the reestablishment of vaginal health was study. The blood concentration of TNF- α and IL-6 at 10 weeks were also studied.

Results: After the use of oral probiotic containing L. rhamnosus BPL205, L. plantarum BPL 207 and L. crispatus BPL209 supplemented with vitamin D, 72,7% and 90,91% of the patients obtained a healthy vaginal microenvironment after 5 and 10 weeks respectively.

70% of those patients with measurable IL-6 (n=10) reduced the levels of blood IL-6.

In patients diagnosed with chronic endometritis at the beginning of the study (n=5) TNF- α levels decrease from 8,14 to 5,59 after 10 weeks using the oral probiotic in study ($p = 0,02$).

Conclusions: The use of L.rhamnosus PBL205, L. plantarum BPL207 and L.crispatus BPL209 reestablish the healthy vaginal environment. This allows better environment to control pathogen proliferation and the fertility. An improvement in inflammatory conditions is also observed.

Conflict of interest: the first author is the Medical Manager of Fertypharm.